From arc5 at ix.netcom.com Fri Dec 1 14:34:53 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Fri, 1 Dec 2017 13:34:53 -0600
Subject: [BoatAnchors] RAX Project: Busted Trimmer Cap Nuts
Message-ID: <008c01d36adb$7a81def0$6f859cd0$@netcom.com>

Both early TCS and RAX receivers suffer from
trimmer capacitors with "busted nuts." These
(typically 50 pFd) trimmer caps are assembled by
compressing a 1/4" nut over the rotor shaft, thus
compressing a spring, setting the proper spacing
between stator and rotor plates.
Over 70 years, the stressed, friction-hold nuts
can crack, releasing the tension on the spring,
forcing the rotor down and contacting the stator,
shorting the cap.
https://photos.app.goo.gl/jTfihh6CKf8Oysdp1

The nut can often be removed with tweezers.
https://photos.app.goo.gl/sG7iXQrj83Aq7ddy1

When you pull the module with the broken cap, you
find:
https://photos.app.goo.gl/yOXVEOPqZsvJXgeA3

It can be hard to find these original trimmers.
Count yourself lucky if you have a direct
replacement. In early TCS receivers, these can be
"double-mounted"
(two caps on a single piece of ceramic), which
makes them even harder to find.

If one doesn't have a direct replacement (used the
only one I had on another project), what can be
done?
I've tried cleaning the shaft and nut thoroughly
with acetone followed by naptha, then using JB
Weld to glue the nut in place. Put a small dab of
JB Weld on the rotor shaft, careful to keep it
from being spread all the way to the bottom of the
nut and thus, sticking the shaft forever.
Compressed the nut and shaft with long-nose
Vice-Grips adjusted for the right spacing and left
it sit overnight.

In three attempts, this worked once (the first
time).

The second one got stuck with a small amount of JB
too far down the shaft. The third popped right
back off.

Thought about it awhile- the idea is to get the
plates separated and stable so the cap can be
used.
Cut some straight strips about 1/4" wide of that
clear, stiff plastic used in "blister" packaging.
https://photos.app.goo.gl/0kouX4ufjRg6kuDo1

Compressed the rotor shaft and inserted these
strips between the shorting plates, fitting
between the rotor shaft and the two posts holding
the stator.
https://photos.app.goo.gl/mjGvhpyOkYY1LSgn1
https://photos.app.goo.gl/jFh9FCdaVuFlvePf1

Once all the plates are insulated, set the rotor
at about 1/4 mesh so that we need move it slowly
in only one direction to find the alignment point
and avoid pushing the plastic inserts out. Gentle
"tweaking" back and forth at the alignment point
was not a problem.

Does it change the dielectric constant of the cap?
Yes. Does it make a difference? Not a bit.
Several original caps are in circuit this way and
working fine. Once aligned, we're not moving them
much if at all, so this should save us some radios
being "shelf queens" for lack of trimmers.

GL OM ES 73 DE Dave AB5S

From gsantacanav at gmail.com Sat Dec 2 11:35:59 2017
From: gsantacanav at gmail.com (Guido Santacana)
Date: Sat, 2 Dec 2017 12:35:59 -0400
Subject: [BoatAnchors] RAX Project: Busted Trimmer Cap Nuts
In-Reply-To: <008c01d36adb$7a81def0$6f859cd0$@netcom.com>
References: <008c01d36adb$7a81def0$6f859cd0$@netcom.com>
Message-ID: <076372D3-3616-40A9-A57A-07E48AF5C6FC@gmail.com>

Dave

I think you have found a permanent solution to this problem. There are three

busted trimmers in my TCS being held by glue. Since the TCS needs some more work, i will use this great idea to hold the plates in place.

Thanks & 73s

Guido

Guido Santacana KP4FAR

Sent from my iPhone

> On Dec 1, 2017, at 3:34 PM, David Stinson via BoatAnchors <boatanchors at theporch.com> wrote:
>
>
> Both early TCS and RAX receivers suffer from
> trimmer capacitors with "busted nuts." These
> (typically 50 pFd) trimmer caps are assembled by
> compressing a 1/4" nut over the rotor shaft, thus
> compressing a spring, setting the proper spacing
> between stator and rotor plates.
> Over 70 years, the stressed, friction-hold nuts
> can crack, releasing the tension on the spring,
> forcing the rotor down and contacting the stator,
> shorting the cap.
> https://photos.app.goo.gl/jTfihh6CKf8Oysdp1
>
> The nut can often be removed with tweezers.
> https://photos.app.goo.gl/sG7iXQrj83Aq7ddy1
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> When you pull the module with the broken cap, you
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> https://photos.app.goo.gl/yOXVEOPqZsvJXgeA3
>
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> replacement. In early TCS receivers, these can be
> "double-mounted"
> (two caps on a single piece of ceramic), which
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> from being spread all the way to the bottom of the
> nut and thus, sticking the shaft forever.
> Compressed the nut and shaft with long-nose
> Vice-Grips adjusted for the right spacing and left
> it sit overnight.
>
> In three attempts, this worked once (the first
> time).
> The second one got stuck with a small amount of JB
> too far down the shaft. The third popped right
> back off.
>
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> plates separated and stable so the cap can be
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> https://photos.app.goo.gl/0kouX4ufjRg6kuDo1
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> strips between the shorting plates, fitting
> between the rotor shaft and the two posts holding
> the stator.
> https://photos.app.goo.gl/mjGvhpyOkYY1LSgn1
> https://photos.app.goo.gl/jFh9FCdaVuFlvePf1
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> in only one direction to find the alignment point
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> "tweaking" back and forth at the alignment point
> was not a problem.
>
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> Yes. Does it make a difference? Not a bit.
> Several original caps are in circuit this way and
> working fine. Once aligned, we're not moving them
> much if at all, so this should save us some radios
> being "shelf queens" for lack of trimmers.
>
> GL OM ES 73 DE Dave AB5S
>
>
> _____
> BoatAnchors mailing list
> BoatAnchors at theporch.com
> https://imac.theporch.com/mailman/listinfo/boatanchors

From arc5 at ix.netcom.com Sat Dec 2 14:37:10 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Sat, 2 Dec 2017 13:37:10 -0600
Subject: [BoatAnchors] RAX Project: Busted Trimmer Cap Nuts
In-Reply-To: <076372D3-3616-40A9-A57A-07E48AF5C6FC@gmail.com>
References: <008c01d36adb$7a81def0$6f859cd0$@netcom.com>
 <076372D3-3616-40A9-A57A-07E48AF5C6FC@gmail.com>
Message-ID: <001201d36ba4$f3b39ec0$db1adc40$@netcom.com>

-----Original Message-----
From: Guido Santacana
[mailto:gsantacanav at gmail.com]
Subject: Re: [BoatAnchors] RAX Project: Busted
Trimmer Cap Nuts

Dave

I think you have found a permanent solution to
this problem..

Thank YOU for your kind letter. I've got two RAX
receivers on the bench right now with this "fix"
and all are running without a problem so far.

73 Dave AB5S

From arc5 at ix.netcom.com Fri Dec 1 14:39:15 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Fri, 1 Dec 2017 13:39:15 -0600
Subject: [BoatAnchors] Smart People: How Would You Fix This?
Message-ID: <008d01d36adc$166eb5e0$434c21a0$@netcom.com>

To the many people here smarter than me:
This is the front of RAX receiver #3.
How would you make the thing look presentable
without destroying the original lettering?
https://photos.app.goo.gl/oBE73jiqAvwjJRZM2

It even works on Chicken Band :-D
https://photos.app.goo.gl/Zx32JRllS4F0xRBq2

73 OM DE Dave AB5S

From arc5 at ix.netcom.com Sat Dec 2 17:07:01 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Sat, 2 Dec 2017 16:07:01 -0600
Subject: [BoatAnchors] Rethinking Re-Capping
Message-ID: <001b01d36bb9$e55570a0$b00051e0$@netcom.com>

Rethinking Re-capping.

Concerning the restoration of
historically-significant radios: my views and
goals have evolved over the years. My goal-
personal fulfillment from answering the challenge
of these sets aside- is to give the radios the
best chance to be preserved beyond my time as
their temporary care-taker. To do so, I believe
the radios must play, and should do so with the
minimum disturbance of the original assembly
possible.

There was a time when I would say "replace very
electrolytic and every paper and every Micamold"
as a matter of course. I no longer do that. Been
working on a set of three RAX receivers that have
been awaiting their turn in my barn and storage,
for at least 12-15 years. All have been playing
12-24 hours now without failure. One needed no
cap replacements at all. The second needed one
and the third needed two. I changed no resistors.
Did repair some bad trimmer caps in two receivers,
but not counting them for this post; different
issue. To find those that actually need te be
changed requires a reliable schematic, a good
meter, a variable B+ supply, patience and a finger
tip.

In a tube type receiver such as the TCS, SCR-274N
or RAX, there are several paths that B+ travels to
ground. Most of them go through tubes. When the
tubes have no filament voltage, the tube plate or
screen pin is a "dead end;" an open circuit. No
current should flow through the tube's plate or

screen circuits.
But there are usually other paths- like screen-voltage dividers- that provide a path for some current flow.

If you spend some time with the schematic, you can trace all the B+ distribution busses, looking for paths to ground. For instance- in the -274N receiver, two 7000-Ohm resistors are connected between B+ and ground as a screen-voltage divider. With the tube filaments off, the receiver out of the rack and with no local control box installed, the only path for B+ to ground is through those two resistors, unless there are leaky bypass caps. So, with no filament voltage, if we connect our variable V+ supply and increase to 100V, we should observe no more than 100/14,000= 7 milliamps of current flowing. If we have more, we have leaky capacitors somewhere.

So how do we find the leaky cap(s)? Did this test on one of the RAX receivers. After allowing "reforming" time for the electrolytic caps (and no filament voltage), at 100V on the buss, it was drawing 20mA. 100V was dropping somewhere and at 20mA, the leak was turning that current into 2 Watts of heat. That doesn't sound like much, but it builds-up quickly. After a few minutes, a finger-tip on one of the .05 uFd screen bypass caps felt the heat and the ZM-11 proved it was the villain. After replacing that cap, the current on the B+ buss dropped to 6 mA; just 2 mA above that expected and close enough to operate. Left the 100V on the buss for four hours and no increase in the current. That's not a promise no other cap will fail- they are 70 years old. But if the goal is to do the least possible and given I'll be running these at reduced B+, the risk of damage is small and acceptable. If one can't "feel the heat," a study of the B+ distribution on the schematic will reveal places one can lift a wire or part to isolate the branch with the bad actor.

In many radios (not in RAX but in others), there are coupling caps that go to grids which can be leaky. Apply B+ with no filament voltage as before. Measure the grid of the tube fed by the capacitor coupling. If you have a positive

voltage on that grid with no filament voltage, change the coupling cap. NOTE: Use a VOM for this, not a VTVM. The very-high input impedance of the VTVM may be "spoofed" by an electro-static charge on the grid side of the capacitor plate. A good VOM will load it just enough to give you a "real" reading. Exception: Leaky cathode bypasses, especially the one at the Audio PA, need to be checked individually, since there's no current path to find them without filament voltage. Quick check: Calculate the current that should flow through the cathode resistor if you put +10V on the tube cathode. i.e. if the cathode resistor is 330 Ohms and you connect +10V to ground to the cathode, you should see 30 mA of current flow. If (after a reasonable "reform" time) it's pulling more than 30 mA, your cathode bypass is leaking.

But what about OPEN bypass or coupling caps? With the danger of frying things from bad bypasses and coupling caps past, one can power the set and check performance. If you have open bypasses or coupling caps, *the circuits will tell you.* Oscillation in IF amps or Converters usually equals open bypasses. A screwdriver touched at tube bases will often change the "motorboating" and tell you which stage is oscillating, or use a scope. If the oscillation changes with tuning, the Mixer/Converter stage is oscillating (this happened with one of the RAX receivers- open cathode bypass on the Converter). If the audio is distorted, look for open bypasses in the 1st Audio and Audio PA. If you have no gain through a stage, check any coupling caps that might be involved. But we shouldn't assume in these cases that capacitors are the culprit; resistance and voltage chart checks are your friends. For instance- I've revived three TCS receivers lately and I find wonky resistors to be an even bigger problem than capacitors.

With these techniques, I have three RAX receivers on the bench playing nicely for hours. I've changed three capacitors, no resistors and one tube. Did also repair some trimmers as noted before.

GL OM ES 73 DE Dave AB5S

From whitebear1122 at comcast.net Sun Dec 3 15:49:14 2017
From: whitebear1122 at comcast.net (Whitebear1122)
Date: Sun, 3 Dec 2017 14:49:14 -0600
Subject: [BoatAnchors] World Radio Lab's Duo-Bander 84
References: <88B56C2E-CA5B-4A15-8466-B6AAC7FD6B42@comcast.net>
Message-ID: <F3A1777C-0DF6-4E3E-93E5-AFFE2B9FD16F@comcast.net>

My good friend W4MIL just gifted me a sweet World Radio Laboratories Duo-Bander 84. Chuck had restored it several years ago and it looks great! The front panel is very simple, two tone gray and aqua color, just a few knobs, and a speaker on the front. I?m going to check into the Sunday night Vintage SSB net out of North Dakota on 3860 with the Duo-Bander tonight and see how it works out.

I was curious about the Duo-Bander history. I see it came out around 1966. I wonder who designed it, and how popular it was. Was it a big seller? Chuck and I were musing over the two speed vernier dial, reminds us of Swan.

Does anyone have some history on this lil gal?

73, Scott WA9WFA

From arc5 at ix.netcom.com Mon Dec 4 06:37:02 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Mon, 4 Dec 2017 05:37:02 -0600
Subject: [BoatAnchors] How to Protect from Nearby Transmitter?
Message-ID: <003101d36cf4$34bfee50$9e3fcaf0$@netcom.com>

This is a Palomar LP-1 loop amplifier. It works
well listening to Longwave. The last time I
transmitted near it (75 mtrs), it blew the FETs.
The diodes didn't do the job. How can I protect
the amplifier from a nearby 472 KC transmitter?
Use a fast MOSFET to short the loop on transmit?

73 OM DE Dave AB5S

From arc5 at ix.netcom.com Sun Dec 3 09:09:25 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Sun, 3 Dec 2017 08:09:25 -0600

Subject: [BoatAnchors] Smart People: Multi-Set Current Corn-fusion
Message-ID: <000001d36c40$55125d50$ff3717f0$@netcom.com>

Dear People Smarter Than Me:

I'm confused. Bumped-up the RAX "burn-in" to 100V
B+, which is provided to all three receivers from
the same buss, using a current-limited supply so
if any of the old parts decides to "shuffle off
this mortal coil," the supply will shut that down.
Did some current measurements with all sets in the
same operating mode:

All sets connected and off: 13 mA, within 1 mA of
expected.
LF set playing alone: 30 mA (has fewer stages than
the others).
LoHF set playing alone: 41 mA.
HiHF set playing alone: 46 mA (about 10% "hot,"
will check).
but:
All three playing normally at once: 83 mA.

Ummm... shouldn't that be like 117 mA?

Anybody got an idea?

73 OM DE Dave AB5S

From arc5 at ix.netcom.com Wed Dec 6 07:58:09 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Wed, 6 Dec 2017 06:58:09 -0600
Subject: [BoatAnchors] Wiring harnesses and nailboards - FWIW
Message-ID: <002d01d36e91$de5b6040$9b1220c0$@netcom.com>

Morning, Nick.
Was going through old mail and must have missed
this.
I seem to miss a lot these days... sigh...
Thanks for posting it. Very cool idea.
73 Dave AB5S

-----Original Message-----
From: Nick England via BoatAnchors

[mailto:boatanchors at theporch.com]
Sent: Tuesday, July 19, 2016 8:58 AM
To: Old Tube Radios
Subject: [BoatAnchors] Wiring harnesses and
nailboards - FWIW

A nice page here -
http://www.dairiki.org/hammond/cable-lacing-howto/

Nick England K4NYW
www.navy-radio.com
_____

From k4pf at juno.com Sun Dec 10 01:24:19 2017
From: k4pf at juno.com (k4pf at juno.com)
Date: Sun, 10 Dec 2017 06:24:19 GMT
Subject: [BoatAnchors] Who knew that Central Electronics once made a CRT
 rejuvenator?
Message-ID: <20171210.012419.18722.0@webmail08.vgs.untd.com>

The panel meter might be of use for owners of a CE 600/L -
https://www.ebay.com/itm/222732122393?ul_noapp=true

From ranickel at comcast.net Sun Dec 10 09:43:21 2017
From: ranickel at comcast.net (Robert Nickels)
Date: Sun, 10 Dec 2017 08:43:21 -0600
Subject: [BoatAnchors] Who knew that Central Electronics once made a CRT
 rejuvenator?
In-Reply-To: <20171210.012419.18722.0@webmail08.vgs.untd.com>
References: <20171210.012419.18722.0@webmail08.vgs.untd.com>
Message-ID: <6bf880a3-bb19-fc6b-fa1d-ea61ed95accd@comcast.net>

On 12/10/2017 12:24 AM, k4pf--- via BoatAnchors wrote:
> The panel meter might be of use for owners of a CE 600/L -
Having learned about Wes Schum from attending the CE-Boatanchor
get-together at his former home in Jonesborough TN for the past two
years, I can understand how he would have responded to a niche
requirement like this.?? And it looks exactly the way you'd expect a CE
CRT Rejuvenator to look!

73, Bob W9RAN

From arc5 at ix.netcom.com Mon Dec 11 08:08:58 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Mon, 11 Dec 2017 07:08:58 -0600
Subject: [BoatAnchors] First 630 Mtr QSO- Sort of....
Message-ID: <001c01d37281$35727ec0$a0577c40$@netcom.com>

Well I had my first 472 KC QSO last night. Sort
of.
John, KB5NJD is on just about every night calling
"CQ" on CW. He's only about 50 miles away and has
an awesome signal. I can hear him very well on
the R1155 I use for a "morale radio" while working
on the bench.
https://photos.app.goo.gl/Psd8LvPuCzw13txs1

All those CQs with no answer- I thought I'd at
least try to "encourage" him. Haven't finished
the 630 Meter antenna yet, so figured I might be
able to get a piddly little signal out- enough to
go 50 miles- with what I had. So I fired-up the
BC-375 with a TU-22 tuning unit and the BC-348.
Only antenna right now is to short the coax to the
80-meter full-wave Delta Loop and feed it against
the normal station ground. The BC-375 can load-up
a dead armadillo and it did deliver a little
antenna current. I couldn't find the key dedicate
to the SCR-287 (different connector from the
usual). So I used the TEST button on the front
panel to key the transmitter.

I didn't expect to have enough signal to cause
John any trouble, but as soon as I signed my call,
he came back. Said I had a 599+ signal! Go
figure on that one? Wonder what those computer
programs would say about that. Anyway, I keyed
(as best I could with that button) "R WILL WRITE
DE AB5S AR." We exchanged emails later to explain
my odd-ball QSO.

And my impression of "Lonesome John?" Turns-out
he's worked 28 states and 5 countries! LOL.

GL OM ES 73 DE Dave AB5S

From jerry7proc at yahoo.com Mon Dec 11 15:57:43 2017
From: jerry7proc at yahoo.com (Jerry Proc)
Date: Mon, 11 Dec 2017 20:57:43 +0000 (UTC)
Subject: [BoatAnchors] Solenoid Type Transformer?
References: <1870301225.1865728.1513025863991.ref@mail.yahoo.com>
Message-ID: <1870301225.1865728.1513025863991@mail.yahoo.com>

Hello Group,
I have run across an electrical item which is unfamiliar to me.? This is an extract from the document which I am using as my reference.??
" Early in 1942 the help of the National Physical Laboratory (UK) was enlisted, therefore, and the head of the DF section, Dr. H. G. Hopkins, after a survey of several Admiralty'Y' service stations, undertook the design of a DF aerial system capable of an accuracy of +- 3 degrees. This consisted of a manually rotated elevated 'H'? Adcock, array connected to the receiver via a solenoid type of transformer, with electrostatic screen. The primary was tuned by means of a fixed condenser? in order to peak at the desired frequency of about 42 mc/s."
Does anyone know what is meant by a "solenoid type" of transformer??
?-- Regards, Jerry Proc E-mail: jerry7proc at yahoo.com

From gumbear at pacbell.net Mon Dec 11 17:12:18 2017
From: gumbear at pacbell.net (Arden Allen)
Date: Mon, 11 Dec 2017 14:12:18 -0800
Subject: [BoatAnchors] Solenoid Type Transformer?
In-Reply-To: <1870301225.1865728.1513025863991@mail.yahoo.com>
References: <1870301225.1865728.1513025863991.ref@mail.yahoo.com>
 <1870301225.1865728.1513025863991@mail.yahoo.com>
Message-ID: <75765E4FB78E4C95A798604466A55A04@Polywell>

A "solenoid" winding is simply a coil of wire helically wound on a tube.
With two windings adjacent to each other you have a transformer.

Arden Allen, KB6NAX

Heaven goes by favor. If it went by merit,
you would stay out and your dog would go in.
-Mark Twain

-----Original Message-----
From: Jerry Proc via BoatAnchors
Sent: Monday, December 11, 2017 12:57 PM
To: boatanchors at theporch.com
Subject: [BoatAnchors] Solenoid Type Transformer?

Hello Group,
I have run across an electrical item which is unfamiliar to me. This is an

extract from the document which I am using as my reference.
" Early in 1942 the help of the National Physical Laboratory (UK) was
enlisted, therefore, and the head of the DF section, Dr. H. G. Hopkins,
after a survey of several Admiralty'Y' service stations, undertook the
design of a DF aerial system capable of an accuracy of +- 3 degrees. This
consisted of a manually rotated elevated 'H' Adcock, array connected to the
receiver via a solenoid type of transformer, with electrostatic screen. The
primary was tuned by means of a fixed condenser in order to peak at the
desired frequency of about 42 mc/s."
Does anyone know what is meant by a "solenoid type" of transformer?
-- Regards, Jerry Proc E-mail: jerry7proc at yahoo.com

_____
BoatAnchors mailing list
BoatAnchors at theporch.com
https://imac.theporch.com/mailman/listinfo/boatanchors

From WA5CAB at cs.com Mon Dec 11 17:12:49 2017
From: WA5CAB at cs.com (WA5CAB at cs.com)
Date: Mon, 11 Dec 2017 17:12:49 -0500
Subject: [BoatAnchors] Solenoid Type Transformer?
Message-ID: <2b734e.7ea2bed8.47605ce0@cs.com>

Sure. A solenoid is any straight coil with length generally greater than
diameter. A solenoid transformer would be two windings with a common axis.
The electrostatic shield might have been a tube made of copper screen
slightly longer than the windings, and with the ends of the screen insulated where
they butted together or overlapped. And insulated from the coils of
course.

Robert Downs - Houston
wa5cab dot com (Web Store)
MVPA 9480

In a message dated 12/11/2017 14:58:55 PM Central Standard Time,
boatanchors at theporch.com writes:
> Hello Group,
> I have run across an electrical item which is unfamiliar to me. This is
> an extract from the document which I am using as my reference.
> " Early in 1942 the help of the National Physical Laboratory (UK) was
> enlisted, therefore, and the head of the DF section, Dr. H. G. Hopkins, after a
> survey of several Admiralty'Y' service stations, undertook the design of a
> DF aerial system capable of an accuracy of +- 3 degrees. This consisted of
> a manually rotated elevated 'H' Adcock, array connected to the receiver
> via a solenoid type of transformer, with electrostatic screen. The primary
> was tuned by means of a fixed condenser in order to peak at the desired
> frequency of about 42 mc/s."

> Does anyone know what is meant by a "solenoid type" of transformer?
> -- Regards, Jerry Proc E-mail: jerry7proc at yahoo.com
>

From ark at ar88.net Mon Dec 11 17:54:00 2017
From: ark at ar88.net (Al Klase)
Date: Mon, 11 Dec 2017 17:54:00 -0500
Subject: [BoatAnchors] Solenoid Type Transformer?
In-Reply-To: <2b734e.7ea2bed8.47605ce0@cs.com>
References: <2b734e.7ea2bed8.47605ce0@cs.com>
Message-ID: <1510367a-56f2-355e-2839-7fa3b4e28312@ar88.net>

And, I further speculate that this might be an easy way to couple the
moving and stationary parts of a DF set.

Al

On 12/11/2017 5:12 PM, Robert Downs WA5CAB via BoatAnchors wrote:
> Sure. A solenoid is any straight coil with length generally greater than
> diameter. A solenoid transformer would be two windings with a common axis.
> The electrostatic shield might have been a tube made of copper screen
> slightly longer than the windings, and with the ends of the screen insulated
where
> they butted together or overlapped. And insulated from the coils of
> course.
>
> Robert Downs - Houston
> wa5cab dot com (Web Store)
> MVPA 9480
>
> In a message dated 12/11/2017 14:58:55 PM Central Standard Time,
> boatanchors at theporch.com writes:
>> Hello Group,
>> I have run across an electrical item which is unfamiliar to me. This is
>> an extract from the document which I am using as my reference.
>> " Early in 1942 the help of the National Physical Laboratory (UK) was
>> enlisted, therefore, and the head of the DF section, Dr. H. G. Hopkins, after a
>> survey of several Admiralty'Y' service stations, undertook the design of a
>> DF aerial system capable of an accuracy of +- 3 degrees. This consisted of
>> a manually rotated elevated 'H' Adcock, array connected to the receiver
>> via a solenoid type of transformer, with electrostatic screen. The primary
>> was tuned by means of a fixed condenser in order to peak at the desired
>> frequency of about 42 mc/s."
>> Does anyone know what is meant by a "solenoid type" of transformer?
>>   -- Regards, Jerry Proc E-mail: jerry7proc at yahoo.com
>>
> _____

> BoatAnchors mailing list
> BoatAnchors at theporch.com
> https://imac.theporch.com/mailman/listinfo/boatanchors

--
Al Klase ? N3FRQ
Jersey City, NJ
http://www.skywaves.ar88.net/

From johnmb at nc.rr.com Mon Dec 11 19:08:08 2017
From: johnmb at nc.rr.com (john)
Date: Mon, 11 Dec 2017 19:08:08 -0500
Subject: [BoatAnchors] First 630 Mtr QSO- Sort of....
In-Reply-To: <001c01d37281$35727ec0$a0577c40$@netcom.com>
References: <001c01d37281$35727ec0$a0577c40$@netcom.com>
Message-ID: <c92cb84e-0486-77e0-9669-7df684bae075@nc.rr.com>

On 12/11/2017 8:08 AM, David Stinson via BoatAnchors wrote:
> Turns-out
> he's worked 28 states and 5 countries! LOL.

That's a great punchline David. That's quite an accomplishment.
Shooting for first 630M WAS perhaps?

Thanks for the writeup!
John K5MO

From vilgotch at bigpond.net.au Wed Dec 13 04:30:23 2017
From: vilgotch at bigpond.net.au (Morris Odell)
Date: Wed, 13 Dec 2017 20:30:23 +1100
Subject: [BoatAnchors] R1155 advice needed
Message-ID: <001901d373f5$009cbc90$01d635b0$@bigpond.net.au>

Hi all,

Dave Stinson's mention of his R1155 reminded me that I have a nice R1155 awaiting its turn on the workbench. It's in reasonable condition considering its age but the clear plastic dial window is quite deteriorated and really needs to be replaced. The window is made of some sort of celluloid I think, shaped to fit the opening in the front panel and bulges outwards.

Has anyone had any success in trying to make one of these from a more modern

plastic? Helpful advice would be very much appreciated.

73 de Morris VK3DOC

This email has been checked for viruses by AVG.
http://www.avg.com

From spr at earthlink.net Wed Dec 13 12:38:21 2017
From: spr at earthlink.net (Scott Robinson)
Date: Wed, 13 Dec 2017 09:38:21 -0800
Subject: [BoatAnchors] R1155 advice needed
In-Reply-To: <001901d373f5$009cbc90$01d635b0$@bigpond.net.au>
References: <001901d373f5$009cbc90$01d635b0$@bigpond.net.au>
Message-ID: <0e89fac2-9731-29d3-2626-fbe0af3803a2@earthlink.net>

Hi Morris,

Well, they are made by vacuum forming: using a mold with vacuum holes in the bottom, draw the heated plastic sheet into the mold. If the front panel can be removed and copied, you'd have at least the correct hole sizes for the mold.

The process might work with only the panel hole, letting the plastic bow inwards and see if it assumes a useful shape.

Season's greetings from California,

Scott

On 12/13/17 1:30 AM, Morris Odell via BoatAnchors wrote:
> Hi all,
>
> Dave Stinson's mention of his R1155 reminded me that I have a nice R1155
> awaiting its turn on the workbench. It's in reasonable condition considering
> its age but the clear plastic dial window is quite deteriorated and really
> needs to be replaced. The window is made of some sort of celluloid I think,
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>
> Has anyone had any success in trying to make one of these from a more modern
> plastic? Helpful advice would be very much appreciated.
>
> 73 de Morris VK3DOC

>
>

From 4cx250b at miamioh.edu Thu Dec 14 21:50:01 2017
From: 4cx250b at miamioh.edu (Jim Garland)
Date: Thu, 14 Dec 2017 19:50:01 -0700
Subject: [BoatAnchors] The "New Look" of QST
Message-ID: <168f01d3754f$67664c60$3632e520$@miamioh.edu>

When my January QST arrived, I turned first to the Classic Radio column, because this month it featured the remarkable Davco DR-30 receiver, one of the most interesting, ground-breaking, solid state receivers of the 1950s. But the write-up turned out to be only two brief pages (half photos), and a few hundred words of mostly generic description. When I thumbed through the rest of the issue, I saw that this pretty much summed up the "new look" of QST: a large number of very short, elementary articles (ranging down to one page) with Novice-level tips about, e.g., using heavier wire for circuits that draw lots of current, and recommending a small-tipped soldering iron to wire up a printed circuit board.

The magazine does have a new look, besides the short articles. The typeface font is significantly larger, paragraphs seem shorter (my subjective impression), the page sizes are reduced (roughly a quarter inch in both dimensions), and the number of pages is reduced from 160 to 144. The articles seem to be written with a breezier style, reminiscent of airline magazines intended for travelers with short attention spans. For me, at least, there isn't much in the new QST that I found interesting.

That said, I realize that I (and most members of this email reflector) are not typical hams. The editors are obviously hoping this new sugary diet will tempt beginners and new readers into the flock, and I don't blame them at all for trying. It's probably a necessary step. I also realize that QST is in a transition phase, and that what we see this month may not resemble what we see a year from now.

But here's what I hope the editors will keep in mind. First and foremost, they (and we) should remember that QST is the journal of record of the North-American amateur radio community. Over the decades, there have been many dozens of ground-breaking articles and projects that have greatly advanced the hobby. Like many of you, I've spent hours pouring over technical articles, trying to understand unfamiliar propagation conditions,

and new types of antennas. There are aspects of the hobby where I'm pretty knowledgeable, but there others about which I'm woefully ignorant. However, if I think back over the articles that stuck with me, the ones that made the greatest impression, they were not the ones that merely contained little snippets of information. They were the comprehensive, thoughtful, detailed articles that I copied and put away in my files. So I suppose I'm arguing for balance in the new QST. Articles for beginners, sure, but I hope there could be one article each month that is longer, comprehensive, and that warrants more than a casual look. An article that stretches the reader, even the Extra Class hams who have been in the hobby for years (and who probably buy most of the high-end rigs). That kind of article has been part of QST's legacy for a century, and is arguably its most important part. That legacy needs to be preserved, because it's vitally important to the hobby.

73,

Jim W8ZR

From rbsingl at ilstu.edu Fri Dec 15 06:58:33 2017
From: rbsingl at ilstu.edu (Singley, Rodger)
Date: Fri, 15 Dec 2017 11:58:33 +0000
Subject: [BoatAnchors] The "New Look" of QST
In-Reply-To: <168f01d3754f$67664c60$3632e520$@miamioh.edu>
References: <168f01d3754f$67664c60$3632e520$@miamioh.edu>
Message-ID:
<DM5PR03MB257269B3D58829DB7449AE0EB80B0@DM5PR03MB2572.namprd03.prod.outlook.com>

Thank you Jim for a VERY well written response to the changes in QST. Perhaps the best way to view this is part of the lagging response to what has now been over two decades of a combination of easier entry and a focus upon growth in numbers over growth in individual knowledge and capability. I don't care for the change in QST but it does fit with the overall strategy of the league.

And I agree with you about the marvelous Davco DR-30 receiver, it is an amazing little box.

Rodger WQ9E

From thompson at mindspring.com Fri Dec 15 14:58:44 2017
From: thompson at mindspring.com (Dave Thompson)
Date: Fri, 15 Dec 2017 14:58:44 -0500 (GMT-05:00)
Subject: [BoatAnchors] The "New Look" of QST
Message-ID: <223910430.7066.1513367924373@wamui-cinderella.atl.sa.earthlink.net>

I agree the technical content is now focused on modes of transmission and fitting

together parts of technology to build things. The product reviews get into much detail and there is heavy emphasis on Emergency and portable operation. If ARRL is trying to build membership via this method then the method has failed as membership has not kept up with the growth of amateur radio.

I always enjoyed looking over the contest line scores and these are only on the web page now and what is happening in each ARRL section is delegated to the section managers who either use e-mail or have a web page. I agree this info was out of date when the QST issue was received.

I have never owned a DR-30 Davco receiver but I saw one on the bench at Bill Slep's in Otto, NC is about 1989. A YL friend in FT. Lauderdale had one in her kitchen and told me it was better that her Collins S line receiver. I expect my QST to arrive any day now.

73 Dave K4JRB

From gumbear at pacbell.net Thu Dec 14 22:36:26 2017
From: gumbear at pacbell.net (Arden Allen)
Date: Thu, 14 Dec 2017 19:36:26 -0800
Subject: [BoatAnchors] The "New Look" of QST
In-Reply-To: <168f01d3754f$67664c60$3632e520$@miamioh.edu>
References: <168f01d3754f$67664c60$3632e520$@miamioh.edu>
Message-ID: <120965820AE74843A7BFE4738B605A95@Lenovo>

> ....When I thumbed through the
rest of the issue, I saw that this pretty much summed up the "new look" of QST: a large number of very short, elementary articles (ranging down to one page) with Novice-level tips about, e.g., using heavier wire for circuits that draw lots of current, and recommending a small-tipped soldering iron to wire up a printed circuit board. ....

ARRL/QST has joined the horde of dumb down providers our great technical revolution is providing us. Yechhhh....!

Arden Allen
KB6NAX

He who is cruel to animals becomes
hard also in his dealings with men.
We can judge the heart of a man by
his treatment of animals.
?Immanuel Kant

From knjhanlon at msn.com Fri Dec 15 19:07:27 2017
From: knjhanlon at msn.com (JAMES HANLON)
Date: Sat, 16 Dec 2017 00:07:27 +0000
Subject: [BoatAnchors] The "New Look" of QST
In-Reply-To: <168f01d3754f$67664c60$3632e520$@miamioh.edu>
References: <168f01d3754f$67664c60$3632e520$@miamioh.edu>
Message-ID:
<MWHPR2001MB0925982FA24CFE47F1056EB6A0080@MWHPR2001MB0925.namprd20.prod.outlook.com>

Jim,

I quite agree. I hope you sent this to QST as a Letter to the Editor.

Jim, W8KGI

_____
From: Jim Garland <4cx250b at miamioh.edu>
Sent: Thursday, December 14, 2017 7:50 PM
To: BoatAnchors at theporch.com
Subject: [BoatAnchors] The "New Look" of QST

When my January QST arrived, I turned first to the Classic Radio column, because this month it featured the remarkable Davco DR-30 receiver, one of the most interesting, ground-breaking, solid state receivers of the 1950s. But the write-up turned out to be only two brief pages (half photos), and a few hundred words of mostly generic description. When I thumbed through the rest of the issue, I saw that this pretty much summed up the "new look" of QST: a large number of very short, elementary articles (ranging down to one page) with Novice-level tips about, e.g., using heavier wire for circuits that draw lots of current, and recommending a small-tipped soldering iron to wire up a printed circuit board.

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73,

Jim W8ZR

From smithab11 at comcast.net Tue Dec 19 09:25:39 2017
From: smithab11 at comcast.net (B. Smith)
Date: Tue, 19 Dec 2017 09:25:39 -0500
Subject: [BoatAnchors] Merry Christmas
Message-ID: <ed9b6b5e-233b-0d21-c7f7-3d5dc981d76f@comcast.net>

Merry Christmas Boatanchors

breck k4che
http://k4che.com/Christmas%202017/Novice%20Christmas.htm

From wb1cmg at gmail.com Tue Dec 19 23:05:02 2017
From: wb1cmg at gmail.com (David Upton)
Date: Tue, 19 Dec 2017 23:05:02 -0500
Subject: [BoatAnchors] Morrow commercial gear
Message-ID: <CAFhJE1AfQvOCd1dua26LCUADNzmppDeWFpp5mmfMMFDmOtkShQ@mail.gmail.com>

Have a foundling marked with Morrow Co , Salem, OR tags. A plaque
affixed to it says NH Civil Defense. This is a plate modulated AM rig
in three sub-chassis within a BUD cabinet, I am looking to correspond
with someone that could help identify this unit further. As rescued,
it is dirty but complete and the only damage seems to be the toggle on
the power switch. Appears to use FT-243 Xtals and mostly miniature
tubes. Guessing this is early '50s? Possibly late '40s. Haven't
been able to find anything on equipment like this. Any ideas
appreciated.

David M. Upton, WB1CMG
Mont Vernon, NH 03057
.

From johnmb at nc.rr.com Wed Dec 20 11:31:38 2017
From: johnmb at nc.rr.com (john)
Date: Wed, 20 Dec 2017 11:31:38 -0500
Subject: [BoatAnchors] Morrow commercial gear
In-Reply-To: <CAFhJE1AfQvOCd1dua26LCUADNzmppDeWFpp5mmfMMFDmOtkShQ@mail.gmail.com>
References: <CAFhJE1AfQvOCd1dua26LCUADNzmppDeWFpp5mmfMMFDmOtkShQ@mail.gmail.com>
Message-ID: <6274e42a-2dc6-ba1b-e083-0a8fca7c92c5@nc.rr.com>

Hi David, could you post a picture somewhere? Might help.

John K5MO

On 12/19/2017 11:05 PM, David Upton via BoatAnchors wrote:
> Have a foundling mar.... (snip)

From arc5 at ix.netcom.com Mon Dec 25 22:41:41 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Mon, 25 Dec 2017 21:41:41 -0600
Subject: [BoatAnchors] RAK and E-Field Probes.
In-Reply-To: <772a64d0-7aa9-6ef8-2ff9-d8486a0deb42@comcast.net>
References: <1262431191.4223062.1514212010120.ref@mail.yahoo.com>
     <1262431191.4223062.1514212010120@mail.yahoo.com>
<001101d37db3$1138f600$33aae200$@netcom.com> <08db779c-5ca6-
e19b-995c-6485deda70b3@comcast.net>
 <772a64d0-7aa9-6ef8-2ff9-d8486a0deb42@comcast.net>

Message-ID: <000101d37dfb$73aeb890$5b0c29b0$@netcom.com>

Tell ya a true story about my first experience with an E-Field Probe: Nevada desert, early 1980s. VERY radio-quiet location. I had a couple of long (understatement) "beverage antennas," which were really just hundreds of feet of telephone field wire stretched across the desert. They worked awesome, but some of the guys kept going on about their E-Field probes. So I got one and tried it.

I honestly thought I had broken it. Compared to what I was using, it was deaf as a post. So I sent it to one of the guys to look at and compare with his "great E-Field antenna." He informed me it was working fine and compared favorably with his. When I got it back, I tried it again with the same results. The guys thought this near-dummy-load was "golden" only because they'd had nothing other than random-wire and 40-mtr dipole noise generators with which to compare it. So of course it seemed heavenly, the way a starving man would find a crust of stale bread and a cup of water "heavenly." In reality, it's "better than nothing," but just barely.
I'm sure others will have a different perspective, and God bless them. This is my experience and why I don't mess with E-Field probes on Longwave. A good tuned loop will whup the pants off one, IMHO.

GL OM ES 73 DE Dave AB5S

From dave at horsfall.org Mon Dec 25 22:49:37 2017
From: dave at horsfall.org (Dave Horsfall)
Date: Tue, 26 Dec 2017 14:49:37 +1100 (EST)
Subject: [BoatAnchors] RAK and E-Field Probes.
In-Reply-To: <000101d37dfb$73aeb890$5b0c29b0$@netcom.com>
References: <1262431191.4223062.1514212010120.ref@mail.yahoo.com>
 <1262431191.4223062.1514212010120@mail.yahoo.com>
 <001101d37db3$1138f600$33aae200$@netcom.com>
 <08db779c-5ca6-e19b-995c-6485deda70b3@comcast.net>
 <772a64d0-7aa9-6ef8-2ff9-d8486a0deb42@comcast.net>
 <000101d37dfb$73aeb890$5b0c29b0$@netcom.com>
Message-ID: <alpine.BSF.2.21.1712261447520.27626@aneurin.horsfall.org>

I tried a "cross-field" antenna for 160m once, and it was hopeless; all it picked up was the magnetic field from the stove when I switched it on...

--
Dave Horsfall DTM (VK2KFU) "Those who don't understand security will suffer."

From nbroline at austin.rr.com Tue Dec 26 18:01:14 2017
From: nbroline at austin.rr.com (Nick Broline)

Date: Tue, 26 Dec 2017 17:01:14 -0600
Subject: [BoatAnchors] E-Field Probes and Loops, VLF and LF (long)
Message-ID: <01A8FB3043674F0EBF8AB52164D5A387@newdualath>

I have been playing with VLF and LF for years and think I have a bit of experience
.both good and bad
.under my belt that may help others who want
to get their feet wet..
I started out using an E-Field probe for picking up the 20 and 60Kc outlets of NBS. It consisted of a CB whip mounted atop a big ceramic feed on a waterproof box. A unity gain preamp followed with a common source FET followed by a bipolar E-follower to drive coax. It was a tremendous antenna, based on noise response, from well below 10Kc up into the broadcast band. Only problem was the noise was tremendous and signals were all near the noise level. I used the NDB'ss around Texas for reference levels, but only one was heard.

After trying the E-probe over the years I finally resolved the probe was picking up power line noise through capacitive coupling, and that the bulk of the energy was NOT electromagnetic (propagating fields). I tried "quiet spots well away fro power lines with little benefit. There just weren't any places it was usable.

I cobbled together a shielded, untuned square loop that was self-resonant above the LF band and tried it on the NDB band. I happened to fire it up first resting on my shack floor and heard what seemed to be hundreds of NDB's from all over NA and the time and frequency stations and LORAN with very strong signals. I converted the haywire loop into a real antenna using 1/2" copper tubing hardware to make a fully shielded, symmetrical loop with the standard insulated gap. The loop winding drove a discrete differential amp followed by gain and line matching (read POWER) stages. That gave me my "dream" vlf/lf antenna. I have replicated it using shorter sides, and used Op amp preamps using both high Z (voltage fed) or current fed (virtual short circuit) amplifiers with the same end performance.

A lesson I've learned is that the role of the active preamp at the loop is only to achieve balance and matching, and gain can be added anywhere in the line....preferably in the shack where it is most convenient and a gain control can be used. Noise figures of amplifiers are not an issue because the natural noise pickup is always going to dominate.

My biggest killer for receiving success was unintended pickup form out-of-band transmitters. Always measure the AC voltage that will be applied to the receiver with an AC VTVM or scope FIRST. It is possible that the loop may be doing it job normally well up into the BC band, and those signals can be very strong compared to the desired signals. My first loop and preamp was giving me (w/24V power source) 14V p-p open circuit down the coax from

local BC stations, and I was very glad I measured it before attaching a receiver. Adding some roll-off in the amplifier brought the BC levels down enough to spare my Rx front end and keep the amplifier out of compression. I have never tried TUNED loops, as the tuning is always used to enhance the output voltage.....the same function of a pre-amp and amplifier perform......and the preamp is much easier than trying to tune a variable cap across the loop remotely!

Anyone who wants to try 2,200 and 630m using a loop is welcome to discuss their plans with me, and I will be happy to share my schematics and cutting schemes if that would help. You will be amazed at the ground wave and incredible low propagation losses. I have heard many 5W LF beacons at 186kc license free band over paths of >1000 miles at night with a SNR of 20+ dB. One can use very narrow bandwidths, such as .01 cycles, and CW rates to match to make QSO's. But that's a different story!
73,
Nick Broline W5FUA
512 327 7425
?
We shall not cease from exploration
And at the end of exploring
Will be to arrive where we started
And know the place for the first time.
????? T.S. Eliot--"Little Gidding"

This email has been checked for viruses by AVG.
http://www.avg.com

From smithab11 at comcast.net Tue Dec 26 19:39:06 2017
From: smithab11 at comcast.net (B. Smith)
Date: Tue, 26 Dec 2017 19:39:06 -0500
Subject: [BoatAnchors] E-Field Probes and Loops, VLF and LF (long)
In-Reply-To: <01A8FB3043674F0EBF8AB52164D5A387@newdualath>
References: <01A8FB3043674F0EBF8AB52164D5A387@newdualath>
Message-ID: <bf6ef40c-e1a8-ccd2-d7a4-d3c2ce5e83e7@comcast.net>

 ? I've had very good luck with using 3 ,4, and 5 foot "tuned" loops with? a single turn coupling feeding 50 ohm coax. Remote Tuning has been accomplished utilizing varicaps in a 9 volt battery system? or screwdriver motors driving? ganged? variables. No preamps were needed.? The loops really come alive when they are tuned to resonance. Out in the field the antenna azimuth is determined by hand but at the home QTH a rotator is utilized and comes in handy when orientating the loop to

reduce line noise. I've been lucky and been able to successful copy the Christmas Eve Message? on 17.2 Kcs (Seventeen point two) several times from the Grimeton Alexanderson Alternator Site in Sweden. However this year Grimeton was down for maintenane of their antenna system.? Using the single turn coupling loop provides plenty of drive with not very much loss? even with 40 and 50 foot coax runs.
 ? k4che
http://k4che.com/Christmas%2007%20loop/Page%201.htm

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> schemes if that would help. You will be amazed at the ground wave and
> incredible low propagation losses. I have heard many 5W LF beacons at 186kc
> license free band over paths of >1000 miles at night with a SNR of 20+ dB.
> One can use very narrow bandwidths, such as .01 cycles, and CW rates to
> match to make QSO's. But that's a different story!
> 73,
> Nick Broline W5FUA
> 512 327 7425
>
> We shall not cease from exploration
> And at the end of exploring
> Will be to arrive where we started
> And know the place for the first time.
> ????? T.S. Eliot--"Little Gidding"
>
>
>
> ---
> This email has been checked for viruses by AVG.
> http://www.avg.com
>
> _____
> BoatAnchors mailing list
> BoatAnchors at theporch.com
> https://imac.theporch.com/mailman/listinfo/boatanchors
>

From arc5 at ix.netcom.com Tue Dec 26 20:39:50 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Tue, 26 Dec 2017 19:39:50 -0600
Subject: [BoatAnchors] E-Field Probes and Loops, VLF and LF (long)
In-Reply-To: <01A8FB3043674F0EBF8AB52164D5A387@newdualath>

References: <01A8FB3043674F0EBF8AB52164D5A387@newdualath>
Message-ID: <001b01d37eb3$96ccdb50$c46691f0$@netcom.com>

An excellent post, Nick. Thank you so much for
this. If I ever hit the lottery, I'm going to
invite you to a little spot I know at Sterling
Peak north of Vegas with an RF noise floor so low
you could probably hear the static electric
discharges from petting a cat in Indian Springs.
Dress warm! In my experience, even in a place
with a rock=bottom RF noise floor, an E-Field
probe is a dud compared to a loop or beverage.
When you have the time, I and many others would be
happy to learn of your cutting schemes and amp
diagrams.

Thank you again, Nick. Peace and Prosperity for
you and yours in the coming year.
Dave S.

From ranickel at comcast.net Tue Dec 26 22:46:07 2017
From: ranickel at comcast.net (Robert Nickels)
Date: Tue, 26 Dec 2017 21:46:07 -0600
Subject: [BoatAnchors] E-Field Probes and Loops, VLF and LF (long)
In-Reply-To: <01A8FB3043674F0EBF8AB52164D5A387@newdualath>
References: <01A8FB3043674F0EBF8AB52164D5A387@newdualath>
Message-ID: <6a1e0328-f1f2-f1f6-3e95-7f05e6408cca@comcast.net>

On 12/26/2017 5:01 PM, Nick Broline via BoatAnchors wrote:
> It consisted of a CB whip mounted atop a big ceramic feed on a
> waterproof box. A unity gain preamp followed with a common source FET
> followed by a bipolar E-follower to drive coax

Nick, from your description that sounds like a "Burhans" e-field
probe.?? Ralph Burhans (now SK but not a ham) was a pioneer in the
"e-field" (sorry for that pun!) and his designs have been widely used
and copied, very popular with? "lowfers" NDB dx-ers because they work
extremely well.? I still use one as my main LF-VLF antenna and nothing
else comes close.??? That most especially includes the "mini-whip"
designs that seem to be all the rage in recent years which substitute a
small piece of copper-clad laminate for the whip.??? I have both
available at the throw of a switch and the 20dB difference is incredible.

The Burhans designs from Feb. and Mar. 1983 issues of Radio-Electronica
can be downloaded from:

http://www.americanradiohistory.com/Radio_Electronics%20_Master_Page.htm

These article provide the best background on theory and pracical
construction of e-field antennas that work significantly better.

73, Bob W9RAN

From kd5byb at kd5byb.net Wed Dec 27 11:36:21 2017
From: kd5byb at kd5byb.net (Ben Hall)
Date: Wed, 27 Dec 2017 10:36:21 -0600
Subject: [BoatAnchors] E-Field Probes and Loops, VLF and LF (long)
In-Reply-To: <01A8FB3043674F0EBF8AB52164D5A387@newdualath>
References: <01A8FB3043674F0EBF8AB52164D5A387@newdualath>
Message-ID: <c97fe55a-bcf8-583b-219a-e2cc4b381658@kd5byb.net>

On 12/26/2017 5:01 PM, Nick Broline via BoatAnchors wrote:
> Anyone who wants to try 2,200 and 630m using a loop is welcome to discuss
> their plans with me, and I will be happy to share my schematics and cutting
> schemes if that would help. You will be amazed at the ground wave and
> incredible low propagation losses.

Good morning Nick and all,

My results are totally opposite - the e-field probes have always
out-received the loops I've built. Clearly I'm doing something wrong
and I'd really like to pair up the RBA and RBL with a good loop antenna.

I've got what I consider to be a pretty good starting point - an
approximately 1.25 meter diameter Moebius Strip Sheilded Loop Aerial as
described by Chris Trask, N7ZWY in the paper entitled "Mastering the Art
of Shielded Loop Aerials."

I've tried a lot of different pre-amps / remote tuning units...but none
out-receive the e-field probes. With the e-field probe and the RBL,
during one listening session I've logged approximately 50 or so
NDB's...and never had anywhere near that with the loop. So I know it's
just not increased noise level giving the impression it's working
better...but better signal to noise ratio.

I'd absolutely welcome ideas for an active pre-amp to mount inside the
loop's junction box...as I suspect that is where I'm going wrong!

I wonder if there has been any work done in the area of vacuum-tube loop
pre-amps? Now *that* would be cool.

thanks much and 73,
ben, kd5byb